

# Find Your First Internship

**A Guide for finding your first tech internship**

*By: Matthew MacRae-Bovell*



# What is this Presentation?

- **Audience:** "You want your first development job and you're not picky"
- All the parts of the job hunting process
- How to **stand out** and how to "play the game"
- Some stuff you might have already heard, but that is important
- Advice gathered from a bunch of my experiences job hunting
- I don't want this presentation to be a big list of all the googleable stuff that's already out there...



# I'm Matthew

I've done the equivalent of roughly  
**"10+ work terms"** + contract work,  
volunteer development and more.



Exp  
Labs.



Fall  
2018

May  
2019

May  
2020

Fall  
2020

Winter  
2021

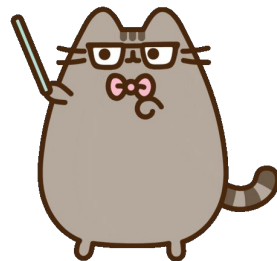
May  
2021

Fall  
2021

Present

# What is an Internship and why should I care?

- Gives you a better idea of what you want to do when you graduate
- Exposure to the difference between industry, school, and academia
- Exposure to different skills, domains, and development ecosystems
- You can “test” a workplace before you commit to a multi year contract
- Start gaining “years of experience”
- Climb the “prestige” ladder quicker
- \*\*Extended Interview



# Internship vs “Co-op”

“Must be in an accredited Canadian cooperative education program”.

Usually indicates you need to be in a co-op program so that institution can receive a **tax break**.

Apply **anyways**, just know that it may not work out.



# Agenda

- ✓ **Reading Postings**
- ✓ **Finding Postings**
- ✓ **Networking**
- ✓ **Resumes**
- ✓ **Interviews**



# Reading Postings



# Term Lengths

## 4 months

Can be very short, you might not get to experience as much

You can often ask to extend

I've **personally** found my learning peaks around 4 months

## 8-16 months

More likely to be given ownership

if you dislike the work or environment you're stuck

\*\*Some companies in the US do quarterly terms





# Job Titles



- **Software Developer**
  - Generic, assumes you'll be doing some form of "development"
  - Could really mean anything
- **Backend**
  - Business logic for some kind of web based system
  - Not aesthetic stuff
- **Frontend**
  - View and client logic for some kind of application
- **Fullstack**
  - Backend + Frontend, hard to tell what position really is from title
  - Usually biased to be more frontend, but that's very subjective based on the position
- **Web Designer / Web Master / Web Developer... when people add Web to the title**
  - Gives me the vibe I'm about to basically just do generic HTML, CSS and JS

# Job Titles



- **"Data Scientist"**
  - Doing Math, finding trends in data, may involved developing tooling related to touching that data
  - Although AI an ML are a part of data science, any position that's actually looking for that stuff changes the title to Machine Learning Engineer or something to seem fancy
- **Business Analyst / IT Analyst**
  - "Analyses" out what the business needs, writes up specifications for the developers, writes metric reports, title is honestly vague whether it will have development
- **Quality Assurance / Automation / Testing**
  - Manually testing or writing automation tests for other people's code

# Job Titles



- **“DevOps”**
  - DevOps = Developer Operations
  - Varies a lot because it is relatively new semantic, but this could mean any of the things below
  - “IT for Developers”
- **Production / Infrastructure / Site-Reliability / Cloud Developer**
  - Usually concerned with system infrastructure, scalability, deployment, etc.
- **Data Engineering**
  - Use or build tools for organizing and or analyzing data

# Job Titles

- **Product Manager**
  - Determine priority of development tasks, probably run scrum meetings
- **Product Designer**
  - Mockups, wireframes, prototypes of the desired interfaces, not necessarily implementing them with code



# Job Titles - Seniority

Software Developer < Senior Developer < Staff Developer

\*\*Titles vary by institution



# Not Sure what Skills a company looks for?

Check their full-time postings.

You'll likely use the same tech as full-time employees.



# Finding Postings



# When To Search

## Summer

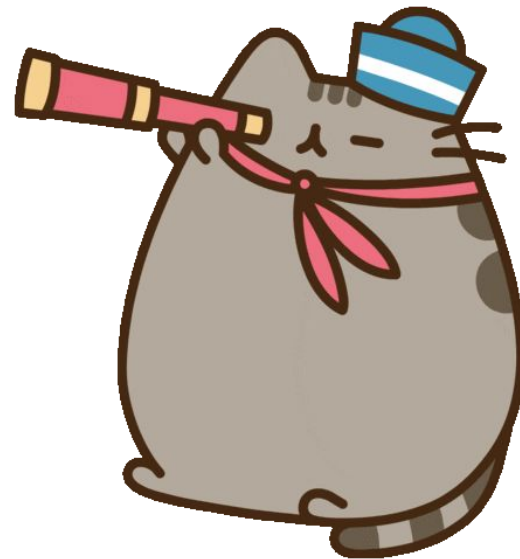
- Summer is the **most** competitive term (few people are in school)
- August - March

## Fall

- The **least** competitive term (everyone's going back to school)
- May - July

## Winter

- More competitive than Fall
- September - November



\*\*\* In reality you kind of never stop looking...



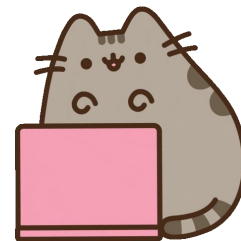
# Where to Search – Surface Level Options



Co-operative  
Education  
**CARLETON UNIVERSITY**

## Title Permutations + location

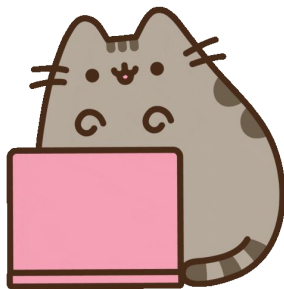
- Software Developer Intern
- Developer Intern
- Software Intern
- Software Developer co-op
- Developer co-op
- Software co-op



# Co-op Jobs Portal

To apply you include

- Resume
- Cover Letter
- **Grades Page**



Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106472	<b>Junior Software Developer</b>	2KEYS Corporation	Development
Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106524	<b>Support Technician, Infrastructu...</b>	Agriculture and Agri-Food Canada ...	IT Client Service
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106748	<b>IT Service Desk Analyst</b>	Agriculture and Agri-Food Canada ...	IT Client Service
Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106456	<b>Software Developer (Co-op plac...</b>	Ajile Light Industries	Research & Deve
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106806	<b>Hardware Design Engineering St...</b>	Arkalumen Inc.	Engineering
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106807	<b>Software Design Engineering St...</b>	Arkalumen Inc.	Engineering
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106659	<b>Software Development Student, ...</b>	Assent Compliance Inc.	Human Resource
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106098	<b>Software Developer Co-Op</b>	Barracuda Networks Canada Ltd.	Human Resource
Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106581	<b>Trial Manager</b>	Bell Canada	Network
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	107046	<b>IPTV Applications Architect (12 ...</b>	Bell Canada	Video Technology
Shortlist	Apply	NEW Deadline in 14 day(s)	2021 - Summer	106987	<b>Bell 2021 Student Opportunities</b>	Bell	Talent Acquisition
			2021 - Summer	106585	<b>Full Stack Developer Student</b>	BlackBerry	Human Resource

# Dean's Summer Research Internships

- Work with professors to conduct research
- Requires a **CGPA of 10**
- Requires you to inquire with profs on your own
- [Link](#)



# Federal student work experience program

- Adds you to a job bank for different departments within the Government of Canada
- Lets you list your field interests





# AngelList

[angel.co/jobs](https://angel.co/jobs) Has lots of startup jobs



CARLETON COMPUTER  
SCIENCE SOCIETY



<https://www.levels.fyi/internships/>

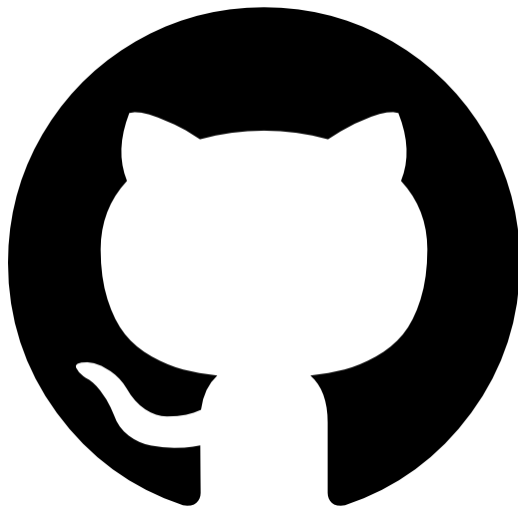


**CARLETON COMPUTER  
SCIENCE SOCIETY**



<https://www.cscareers.dev/>

<https://discord.com/invite/cscareers>



<https://github.com/pittcsc/Summer2023-Internships>

<https://github.com/jenndryden/Canadian-Tech-Internships-Summer-2023>



## Finding Postings ++

- Find companies in your area - Kanata North, Downtown Ottawa
  - Google: "{x company} internship"
- Look at the list of companies that came to past Carleton Career Fairs

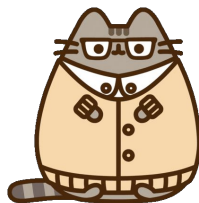


# Networking



# Career Events

- Conferences
- Career Fairs
- Meetups
- Hackathons (sponsors)
- Networking Events
- **Carleton MySuccess Calendar**



Thursday, September 22, 2022

## The Virtual Fall Career Fair Will Host 65+ Employers: Here's What You Need to Know

All Carleton students and new graduates are invited to attend the Virtual Fall Career Fair on Wednesday, October 19, 2022, from 10:00 a.m. to 4:00 p.m. The Career Fair will give you the opportunity to:

- Chat with recruiters and professionals one-on-one. Meetings will take place as speed-networking-style conversations (about 10 minutes). This is done primarily through text chat, though some employers may use audio or video calls.

Carleton Career Fair - **October 19th**



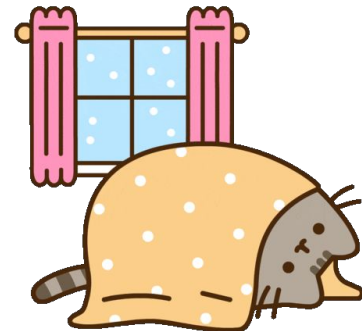
# How to prepare for career fairs

For each company, figure out what they do and what skills they look for

- [Example](#)

You can find desired skills by looking at the full-time job postings in their careers section





## Helpful Career Fair Advice

- You are going to the event to **“impress”** not to “learn”.
  - You should already know the kinds of positions they’re hiring for
  - You’re going to shake the recruiters hand
- **Do not** ask the company **“what they do”**... you should already know
- **Do not** say “I’m **first year** standing”
  - Understand you are competing with upper-year students
- Take **interest** in working at their company
  - Show you actually care by saying something like “I’ve heard {x} is the leader in {y}”

## Learn to Sell Yourself

Sell yourself one way to the recruiter and another way to the developer.  
The recruiter is looking to tick off boxes – say you know those skills.

“Hi my name is {name} and I have a background in {x,y,z}. I’ve heard great things about {something that show you care} at {company}, and was interested in applying and learning about your upcoming student positions”.



## Make a LinkedIn

- Go spam add a few hundred people - no one cares if it's cringe, just get it over with.
- You don't need to post anything, but having one is important because recruiters will search your name on LinkedIn after looking at your resume.



# Using LinkedIn

- Inquire about Internship opportunities with “**Recruiters**” or “**Talent Acquisition**”



**Matthew MacRae-Bovell** • 11:19 PM

Hi  My name is Matthew and I'm a computer science student who would love to intern with  I'm currently searching for a Software Developer co-op for the upcoming summer and fall terms. I'm experienced with Ruby on Rails, React and Java. I would love to chat if you're free!

- You can also reach out once a posting is live to inquire about specific posting details.
- User activity raises you in recruiter search results







**CARLETON COMPUTER  
SCIENCE SOCIETY**



[rocketreach.co](https://rocketreach.co)

# The Matthew M-B Strategy.

- Reach out to “Hr / recruiter” for company that has been to Carleton career fairs before a **month or two** before the anticipated career event.
- Show up to the career fair - say you chatted with them on LinkedIn.
- Show them your very fancy carton resume that you got done at the Carleton print shop.
- Congratulations, now they will be forced to remember you.



# Applying



# Objective Resume Advice

- Make sure your resume scans - [there are tools to test this](#)
  - Two Columns Might not parse as well as single column
- Make sure it prints - check your page margins
- Grammar Check - Just do it...



# Matthew's Resume Advice

- **Just look at what everyone else is doing.**
  - Find the resume of a student who got into a company you want to work for, you can infer factors helped them land the job
  - /r/csMajors
    - You can find a few hundred or so resumes to scan on the weekly resume roast threads
- Taking raw resume advice (especially from other students) is hard to filter because what works for some people is not guaranteed to work for you. It might even hurt you.



## Matthew's Resume Advice++

- You can't please everyone: keep it general for general applying, tailor if you care more
- Resume needs to be "tailored" for both the non-technical recruiter and the developer
- Good formatting, spacing, etc. - shows you pay attention to detail
- There is no perfect template, you need to find or create a template that fits your background
- Don't oversaturate your skills - probably doesn't apply if you're 1st or 2nd year
- Maximize space ~ Broken lines look gross and waste space ... reword your points until they fit

## What do I put on my resume if I don't have anything?

- Projects - great way to show experience with technologies without having paid experience
  - Don't have any projects? - Word your school work into projects
    - Yes ,this is dangerous because recruiters are going to see the same projects over and over from Carleton students
- Add Extra-curriculars
- Add Interests
- Have really pretty spacing. Make it minimalistic.



**CARLETON COMPUTER  
SCIENCE SOCIETY**



[overleaf.com](https://overleaf.com)





CARLETON COMPUTER  
SCIENCE SOCIETY

# Matthew's First Resume



**CARLETON COMPUTER  
SCIENCE SOCIETY**

## Matthew MacRae-Bovell

Email: [matthewmacraebovell@gmail.com](mailto:matthewmacraebovell@gmail.com)

Website: [www.matthewmacraebovell.ml](http://www.matthewmacraebovell.ml)

Github: [github.com/MathyouMB](https://github.com/MathyouMB)

Cell: (613) 720-0969

---

### Education:

#### Honours Computer Science

Carleton University | Expected April 2022

- Learning common data structures, complexity of algorithms, and program efficiency

Sept 2018 -  
Present

---

### Relevant Experience:

#### Python Developer

Digitera Interactive | Python, BeautifulSoup, Selenium

- Programmed Python based social media automation, and web scraping software

July 2017 -  
Aug 2017

#### Game Developer

Recreo Mortem | C#, AS3, MySQL, Redis

- Developed C# server side and AS3 client side game content
- Managed MySQL and Redis login information databases
- Recreo Mortem was a Realm of the Mad God game server active early 2018

Dec 2017 -  
July 2018  
/

---

### Projects:

#### 12 Box | PHP, MySQL, jQuery

- 12 Box is a social networking website project where users create a profile using 12 images. It was developed to further learn PHP.

Nov 2018 -  
Present

#### Connect Fources | JavaFx , JavaScript

- Connect Fources is a more complex version of Connect Four where you can choose to change the direction of gravity instead of placing a disk

Apr 2018 -  
Present

Literally just looks like it  
was made in google docs.  
Does not stand out.

**Exp  
Labs.**





CARLETON COMPUTER  
SCIENCE SOCIETY

# Matthew MacRae-Bovell

Computer Science Student

✉ matthewmacraebovell@outlook.com

📞 +1 (613)-720-0969

📍 Ottawa, Canada

🌐 Github.com/MathyouMB

🌐 matthewmacraebovell.com

## WORK EXPERIENCE

### — Application Platform Developer Intern

Kinaxis

Ottawa, ON

05/2020 - 08/2020

- Accepted summer 2020 offer of employment
- Will be developing features for Kinaxis' cloud-based supply chain management product 'Rapid Response'

### — Student, IT Systems Developer

Bank of Canada

Ottawa, ON

05/2019 - Present

JavaScript JQuery Powershell HTML/CSS

- Normalized and refactored the schema and domain model of an existing web application to simplify the application's architecture and eliminate data redundancy
- Managed the data migration between application schemas, ensuring only non redundant data remained and model relations were successfully kept during the migration
- Worked with ES6+ JavaScript, REST APIs, and techniques such as asynchronous programming to optimize client-side performance and maintain a variety of legacy applications

### — Junior Web Developer

Explorator Technology

Ottawa, ON

04/2019 - Present

React Ruby on Rails Express GraphQL Docker

- Currently developing and maintaining client contracted applications using React, Express, Ruby on Rails, and a variety of Amazon Web Services including S3, and EC2
- Refactored existing RESTful Rails and Express applications to utilize GraphQL and optimize user bandwidth usage
- Normalized Postgres and MySQL relational databases to

## EDUCATION

### — B.C.S. in Computer Science (Honours)

Carleton University

Ottawa, ON

09/2018 - 04/2022 (Expected)

C C++ JavaScript Python Java SQL

- Presently learning the fundamentals of systems programming, data structures, algorithm time complexity, relational databases, and software design patterns

## TECHNOLOGIES

Frontend: React Redux SASS JQuery  
Backend: Ruby on Rails Express Flask ASP.NET  
DevOps: Docker Jenkins Kubernetes Git  
Databases: Postgres MongoDB Redis Firebase

## RECENT PROJECT

### — Stack Search

CuHacking 2019

Ottawa, ON

02/2019

Python Flask Bootstrap Selenium Heroku

- Stack Search is an employment related search engine that indexes jobs based on technical skillset to simplify job searching for software developers
- The project was built collaboratively at CuHacking 2019 using a Flask backend, and Selenium for data retrieval

## EXTRA CURRICULARS



CARLETON COMPUTER  
SCIENCE SOCIETY

# Matthew's Opinionated ***\*\*Special\*\**** Resume

# Matthew MacRae-Bovell

Impact-Driven Software Developer (He/Him)

[matthewmacraebovell@outlook.com](mailto:matthewmacraebovell@outlook.com)  
[github.com/MathyouMB](https://github.com/MathyouMB)  
[matthewmacraebovell.com](https://matthewmacraebovell.com)

## EXPERIENCE

### Shopify Inc.

#### Software Developer Intern

Sept 2021 - Present

Ruby on Rails Kafka Golang Datadog Terraform

**Flow Team** - Contributing to Flow, a tool automating millions of tasks within Shopify stores

- Worked on Flow's GraphQL API, orchestration engine, and declarative domain model project
- Verified impact of changes on SLOs by utilizing load tests, metrics, and Datadog notebooks
- Increased resiliency in core event-driven services in preparation for significant Black Friday traffic
- Managed Kubernetes manifests and cloud service configurations with Terraform
- Participated in scheduled "on-call" rotation responsible for identifying and triaging production bugs
- Authored technical specifications subject to review from co-workers and senior leadership
- Assisted teammates working in areas of my expertise through pair programming and code reviews

### Royal Bank of Canada

#### Software Developer Intern

May 2021 - Aug 2021

Angular TypeScript Spring RxJS MongoDB

**Choose A Bank Team** - Contributed to applications and tools focused on customer acquisition

- Developed features for an Angular and Spring microservice codebase using agile methodologies
- Participated in discussions to determine foundational architecture of several core features

### Carleton University

#### Project Assistant

May 2021 - June 2021

Svelte TypeScript React Python

**School of Computer Science** - Contracted to organize a project on behalf of the department

### Score Media Ventures Inc.

#### Software Developer Intern

Jan 2021 - Apr 2021

Elixir Ruby on Rails Phoenix Kubernetes CircleCI

**Sports Core Team** - Contributed to the services behind TheScore's sports media application

- Utilized knowledge of OTP to develop fault-tolerant GenServer based data ingestion services

## EDUCATION

### Carleton University

Sept 2018 - Apr 2023 (expected)

Bachelors of Computer Science  
Honours - Fourth Year

## OPEN SOURCE

### Sorbet

September 2021

Contributed fixes to the core Ruby types provided by Sorbet.

### GraphQL-Ruby

February 2021

Fixed outdated documentation impacted by the release of Ruby 3.0.

### DiscreteMath.ca

March 2020 - Present

Created a web platform for Carleton University's discrete math courses.

## COMMUNITY

### Carleton Computer Science Society

Sept 2018 - Present

President and five-time elected



# Matthew MacRae-Bovell

Impact-Driven Software Developer (He/Him)

matthewmacraebovell@outlook.com  
github.com/MathyouMB  
matthewmacraebovell.com

## EXPERIENCE

### Shopify Inc.

Software Developer Intern

Sept 2021 - Present

Ruby on Rails Kafka Golang Datadog Terraform

- Flow Team - Contributing to Flow, a tool automating millions of tasks within Shopify stores
- Worked on Flow's GraphQL API, orchestration engine, and declarative domain model project
  - Verified impact of changes on SLOs by utilizing load tests, metrics, and Datadog notebooks
  - Increased resiliency in core event-driven services in preparation for significant Black Friday traffic
  - Managed Kubernetes manifests and cloud service configurations with Terraform
  - Participated in scheduled "on-call" rotation responsible for identifying and triaging production bugs
  - Authored technical specifications subject to review from co-workers and senior leadership
  - Assisted teammates working in areas of my expertise through pair programming and code reviews

### Royal Bank of Canada

Software Developer Intern

May 2021 - Aug 2021

Angular TypeScript Spring RxJS MongoDB

- Choose A Bank Team - Contributed to applications and tools focused on customer acquisition
- Developed features for an Angular and Spring microservice codebase using agile methodologies
  - Participated in discussions to determine foundational architecture of several core features

### Carleton University

Project Assistant

May 2021 - June 2021

Svelte TypeScript React Python

School of Computer Science - Contracted to organize a project on behalf of the department

### Score Media Ventures Inc.

Software Developer Intern

Jan 2021 - Apr 2021

Elixir Ruby on Rails Phoenix Kubernetes CircleCI

- Sports Core Team - Contributed to the services behind TheScore's sports media application
- Utilized knowledge of OTP to develop fault-tolerant GenServer based data ingestion services
  - Worked with Kubernetes, Bugsnag, Datadog, and Splunk to supervise infrastructure

### Fullscript

Software Developer Intern

Sept 2020 - Dec 2020

Ruby on Rails React TypeScript GraphQL Docker

- API and Integrations Team - Contributed to Fullscript's developer API and third-party integrations
- Developed service objects responsible for the OAuth handshake with third-party integrations
  - Increased test coverage by writing unit and integration tests using RSpec, Jest, and Enzyme

### Kinaxis Inc.

Application Platform Developer Intern

May 2020 - Aug 2020

ASP.NET Java Maven Jenkins

Platform Team - Contributed to the services behind Kinaxis' supply chain management platform

### Bank of Canada

Student, IT Systems Developer

May 2019 - Apr 2020

JavaScript JQuery HTML/CSS Azure

Corporate Administration Portfolio - Built internal tools for administration departments

## EDUCATION

### Carleton University

Sept 2018 - Apr 2023 (expected)

Bachelors of Computer Science  
Honours - Fourth Year

## OPEN SOURCE

### Sorbet

September 2021

Contributed fixes to the core Ruby types provided by Sorbet.

### GraphQL-Ruby

February 2021

Fixed outdated documentation impacted by the release of Ruby 3.0.

### DiscreteMath.ca

March 2020 - Present

Created a web platform for Carleton University's discrete math courses.

## COMMUNITY

### Carleton Computer Science Society

Sept 2018 - Present

President and five-time elected executive, leading the organization of services for 2500+ students.

### CuHacking

Mar 2019 - Jan 2021

Contributed to the organization of Carleton's annual hackathon attended by over 600 students.

## TECHNOLOGIES

### Languages Backend

JavaScript Ruby on Rails  
Ruby Django  
Golang Spring

### Frontend Infrastructure

React Docker  
Svelte Kubernetes  
Angular Terraform

- "On the job" skills vs "actual" skills
- Education and work experience at the top
- "Line" about team placement

\*\*\* Do note that I use this resume for presentation only. It is not optimized for parsers, but it's great for career events because it really stands out.

# My Opinion of Cover Letters



- Yes, not a lot of them get read
- Regardless, some people will weed you out
- Create a very minimal short cover letter that can easily be templated
  - Say the most with the fewest words
  - Include one sentence from the application in your cover letter





# Cover Letter Structure

- Paragraph 1
  - Sentence 1: Who you are, your background
  - Sentence 2: How you found the company (if applicable)
  - Sentence 3: One Sentence from the application
    - Ex: "... and I want to join {company} to help **{build the future of x}**
- Paragraph 2
  - 3-5 Sentences about your best work - projects, experience, volunteer, etc.
- Paragraph 3
  - "This {summer?}, I would love to bring my passion for development to {company}. Feel free to contact me any time via email or phone to schedule an interview."

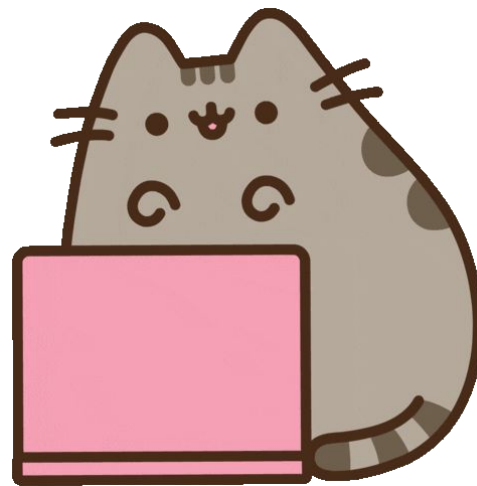


# Interviews



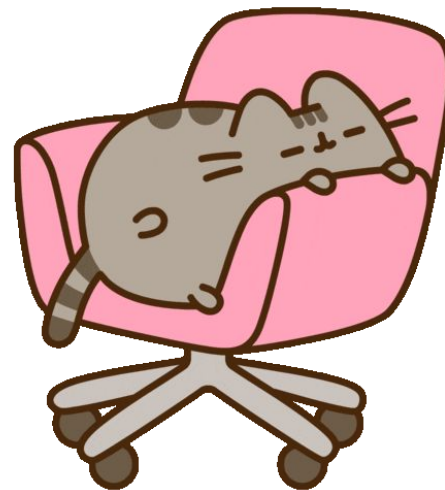
## After Applying

- **OA - Online Assessment**
  - Take home project challenge
  - Time-based code challenge
- **Behavioral "HR" Interview**
  - Communications skills
  - Culture Fit
- **Technical Interview**
  - Algorithms
  - OOP Questions
  - System Design

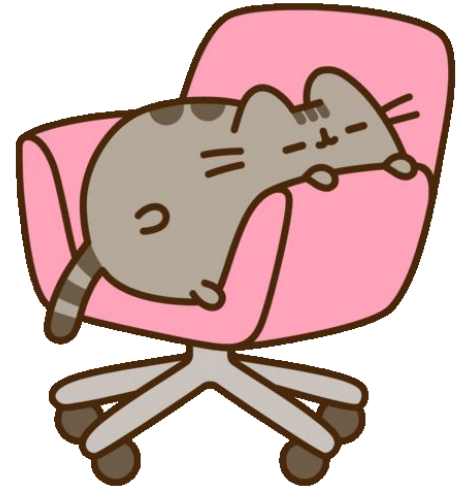


## What is the Interviewer looking for? (Depends)

- If your someone they'd want to work with
- If you actually care about the work
- If you have a strong desire to learn
- How you communicate your ideas
- Some level of technical skill
- "Well rounded people"



Check Reddit and Glassdoor  
for previous interview  
experiences.





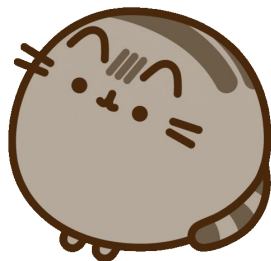
## Obligatory LeetCode Slide

- You can't just do "8 hours of LeetCode"
- When I used to care about LeetCode, I did 1 problem a day and would attempt the problem again 1 week later to make sure I still understood it. Sort by difficulty, acceptance.
- I find LeetCode isn't that crucial for jobs at the local level



## Before you Accept

- Don't feel pressured to accept a job offer immediately over the phone, take some time to think it over
- Know what you're going to be doing (at a surface level)



# Thank You!

Questions?



## Future Ideas

- Personal Projects Deep Dive
- Modern Software Development: What skills will help you get a job
- The Tech Industry: What factors influence a work environment

